

EXPERIMENTS RELATING TO THE ACTION OF ALCOHOL
ON THE BRAIN.

Dr. J. J. Ridge, physician to the London Temperance Hospital, publishes the results of his experiments in the "Medical Temperance Journal." He admits that alcohol acts as a narcotic, thereby dulling the action of the cortical centres. His experiments, which required a considerable degree of mental as well as muscular alertness, consisted in the endeavor "to pass a pointed stick through a swinging ring, counting the number of swings between each successful endeavor, and adding these together when sixty had been accomplished. A certain dose of rectified spirit was then taken, and after fifteen minutes the number of swings required to accomplish sixty more successes was counted."

The following table shows the results of his experiments :

<i>Alcohol.</i>	<i>No. of Swings before.</i>	<i>No of Swings after.</i>	<i>Percentage of Increase.</i>
1 drachm	153	169	10.5
	113	126	11.6
	112	123	9.8
2 drachms	166	194	16.9
	145	156	7.5
	132	154	16.6
3 drachms	125	146	16.8
	134	185	38.0
	115	142	23.5
4 drachms	141	204	44.6

It is thus seen that, after the ingestion of the alcohol, he was less successful in passing the stick through the ring than before taking that agent, and it is also seen that the degree of insuccess was approximately proportional to the quantity of alcohol absorbed. Each experiment was done on a different day, so that no influence upon the results can be attributed to fatigue. The several functions of the brain and spinal cord that are tested in these experiments are : 1st, the steadiness of the hand (co-ordination of muscles) ; 2d, visual acuity ; 3d, accuracy of judgment ; 4th, rapidity of thought (perception and decision) ; 5th, rapidity of muscular action ; 6th, power of self-control.

The experiments of Kraepelin, published by Lander Brunton, in his text-book of pharmacology, point in the same direction. This experimenter studied the influence of

alcohol in three forms of tests, viz.: (a) to find the time required for simple reaction, *i. e.*, for a message received by the senses and returned by the motor nerves; (b) for discrimination; (c) for decision. In all of these tests, involving a certain interposition of cortical activity, the mental processes were found to be prolonged and retarded by the absorption of alcohol by the person under experiment.

DRUNKENNESS: ITS INFLUENCE UPON THE MIND.

Dr. T. L. Wright, of Bellefontaine, Ohio, has an article in the "Quarterly Journal of Inebriety," for January, in which he studies the effects of alcohol upon the mind. He rightly disparages the common opinion that this substance really adds to the power, scope, and brilliancy of intellectual operations, and truly remarks that the poison impresses and modifies the mental faculties separately and in detail, and also throws an undefined and immovable glamour over the mind as a whole, so that it is quite incapable of correctly judging of its own condition. The *attention* of an intoxicated man is more difficult to enlist than that of a sober man, because, his nervous sensibilities being enfeebled, he is not thoroughly alive to ordinary sensations and impressions, and for this reason his ideas become fixed, his opinions unchangeable, while in this state. He may not even rightly feel the flight of time, and be astonished when told how late it is. Under the same circumstances wonderful *egotism* becomes developed in him. The geniality and good-nature of new intoxication are intensely selfish. He loses his affection, love, or regard for others, and manifests a morbid feeling of grandeur united with one of condescension for others. When used as a stimulant by public speakers, alcohol is apt to cause a superficial fluency of speech, while really detracting from its merit or wit. It causes the expression of empty assumptions and baseless exaggerations, and the delivery of a string of pompous or high-sounding verbiage, instead of words pregnant with thought. It also produces a diminution of sensations and a dullness of perception, and often an aberration of the latter, so that illusions, hallucinations, and delusions are produced. The idea that somehow *he is physically invulnerable* is no doubt largely due to the dullness of sensation and perception in the person intoxicated, and this idea is no doubt the cause of those rash exhibitions of reckless courage often given by intoxicated persons.

The influence of alcohol upon *consciousness* is well known. All the mental processes included under that term are impaired by it. Memory, judgment, discrimination, are para-